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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 10/777,348 | 02/11/2004 | Arvind Pruthi | 5693P058 | 5077 |
| 48102 7590 07/19/2007 NETWORK APPLIANCE/BLAKELY 1279 OAKMEAD PARKWAY SUNNYVALE, CA 94085-4040 | | | EXAMINER BLACK, LINH | |
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

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|------------------------------|--------------------------------------|--------------------------------------|--|
| Office Action Summary | Application No. 10/777,348 | Applicant(s) PRUTHI ET AL. | |
| | Examiner LINH BLACK | Art Unit 2163 | |

– The MAILING DATE of this communication appears on the cover sheet with the correspondence address –

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 19 March 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-32 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-32 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claims 1-32 are pending in the application. Claims 1 and 17 are the independent claims.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 10 recites the limitation "the second storage device" in last line of claim 10, page 10. There is insufficient antecedent basis for this limitation in the claim. Either claim 1 or claim 3 teaches "a second storage device".

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lee (US 2003/0131209), and further in view of Mutalik et al. (US 6029166).

As per claims 1 and 17, Lee teaches generating an offset map to indicate an exact location of each file in a backup image, before any file data has been written to the

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backup image – paragraphs 0044-0047, 0051, 0062.

storing the offset map to the backup image on a storage device before storing the file data to the backup image – pars. 0046-0047, 0051, and 0063-0065. However, Lee does not explicitly suggest file data. Mutalik teaches file map, file offset pointer, the backup server file system – col. 10, lines 29-55. Thus, it would have been obvious to one of ordinary skill in the art at the time of the invention to combine Lee's and Mutalik's teaching in order to facilitate the backup files/records – Mutalik, col. 5, lines 7-30.

As per claims 2 and 18, Lee teaches writing the offset map to the backup image – pars. 0015, 0039, 0062-0064, 0071-0073; fig. 9: an exemplary address table according to write operations of the memory. Lee does not explicitly suggest file data. Mutalik teaches file map, file offset pointer, the backup server file system – col. 10, lines 29-55; after the file map generator has generated the information for the file map, the control module and the file map utilization can proceed with subsequent operations during the backup and restore operation...to provide information for the files to be backed up or restored – col. 5, lines 18-29. Thus, it would have been obvious to one of ordinary skill in the art at the time of the invention to combine Lee's and Mutalik's teaching in order to facilitate the backup files/records – Mutalik, col. 5, lines 7-30.

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Claims 3 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lee (US 2003/0131209), in view of Mutalik et al. (US 6029166), and further in view of Cohn et al. (US 5448718).

As per claims 3 and 19, Lee teaches prior to generating the offset map, receiving a request to generate the backup image – pars. 0017 and 0051. Lee does not explicitly teach the request indicating a backup path and generating a list of files to be included in the backup image. Mutalik teaches identify particular files which are stored on the mass storage subsystem that are to be backed up...; writing the list of files to be included in the backup to the backup - col. 4, last paragraph; col. 9, lines 50-54. Thus, it would have been obvious to one of ordinary skill in the art to combine Mutalik's and Lee's teachings in order to allow the identification of files to be backed up. However, Mutalik and Lee do not explicitly teach the request indicating a backup path. Cohn teaches a member path of the group of paths associated with the data backup session – col. 3, lines 35-61; col. 8, lines 10-21. Thus, it would have been obvious to combine Lee's, Mutalik's, and Cohn's teachings in order to identify all files to be backup in a particular segment of locations or paths.

As per claims 4 and 20, Lee teaches allocate the memory space/size when requested/required in the backup image – pars. 0006, 0041-0044, 0057.

Claims 5 and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lee (US 2003/0131209), in view of Mutalik et al. (US 6029166) and Cohn et al. (US 5448718), and further in view of Schutzman (US 6760823).

As per claims 5 and 21, Lee, Mutalik, and Cohn do not explicitly teach compensating for any holes that may exist in the file, as the file is stored on a file system. Schutzman teaches mapping of individual files, backup storage, a beginning offset value and a length, backup file mapping – col. 3, lines 10-19; col. 4, lines 8-36; hole/gap – col. 10, lines 54-67. Thus, it would have been obvious to combine Lee's, Mutalik's, Cohn's teachings, and Schutzman's teaching in order to better manipulate the backup space – Schutzman, col. 11, first paragraph.

Claims 7 and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lee (US 2003/0131209), in view of Mutalik et al. (US 6029166) and Cohn et al. (US 5448718), and further in view of Lu et al. (US 20040225834)

As per claims 7 and 23, Lee, Mutalik, and Cohn do not explicitly teach determining whether the file has any associated streams and, if so, adding the associated streams to the list of files to be included in the backup image.

Lu teaches combining data streams generally denotes copying or backing up archive files associated with different streams onto a single or fewer number of streams, thereby minimizing the number of media required for an auxiliary copy operation and consequently reducing the number of mount/unmount times necessary. Thus, it would have been obvious to combine Lee's, Mutalik's, Cohn's teachings, and Lu et al.'s

teaching in order to backup files' associated streams and adding/combining streams into backup files helps minimize/reduce the number of mount/unmount times necessary.

Claims 8 and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lee (US 2003/0131209), in view of Mutalik et al. (US 6029166) and Cohn et al. (US 5448718), and further in view of Sandifer (US 6535890).

As per claims 8 and 23, Lee, Mutalik, and Cohn do not explicitly teach determining whether the backup path indicates a directory and, if so, adding any files within the directory to the list of files to be included in the backup image. Sandifer teaches backup drives, paths, directories, and files; if the user selects either backup system files or backup everything, the maintenance and repair information system 10 automatically proceeds to place all related files in the specified destination directory – col. 68, lines 35-67. Thus, it would have been obvious to combine Lee's, Mutalik's, Cohn's teachings, and Sandifer et al.'s teaching in order to backup all specified files in a provided backup path.

Claims 10 and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lee (US 2003/0131209), in view of Mutalik et al. (US 6029166) and Cohn et al. (US 5448718), and further in view of Coombs et al. (US 20040030852).

As per claims 10 and 26, Lee, Mutalik, and Cohn do not explicitly teach generating file attribute information for each file included in the list of files to be included in the backup image; and writing the file attribute information to the beginning of the backup image on

the secondary storage device. Coombs et al. teach system and method for data backup – the title; whether performing a full or incremental backup, the entire file structure at the primary data storage device is scanned to establish a list of every file and their file attributes, such as last changed time, size, permission attributes, owner and group identifiers, and any implementation-specific flags that may be desired ...to store the backup on device 24, a backup storage device, (besides a primary storage device 22 of fig. 1a), a backup header including, for example, a name of the computer system and/or primary storage device being backed up, backup date/time, backup software version, and other attribute indicators is prepared and written to the device – pars. 0045-0047. Thus, it would have been obvious to combine Lee's, Mutalik's, Cohn's teachings, and Coombs et al.'s teaching in order to better manage files during files backup and/or restoring (Coombs et al., par. 0047)

Claims 11 and 27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lee (US 2003/0131209), in view of Mutalik et al. (US 6029166), Cohn et al. (US 5448718), Coombs et al. (US 20040030852) and further in view of Miloushev et al. (US 20020120763).

As per claims 11 and 27, Lee, Mutalik, Cohn, and Coombs et al. do not teach wherein the file attribute information includes Access Control List information. Miloushev et al. teach the file attribute information includes Access Control List information – par. 0204. Thus, it would have been obvious to combine Lee's, Mutalik's, Cohn's, Coombs et al.'s

teachings, with Miloushev et al.'s teaching in order to backup access authorizations to objects/files, thus, better manage files.

Claims 12 and 28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lee (US 2003/0131209), in view of Mutalik et al. (US 6029166), Cohn et al. (US 5448718), Coombs et al. (US 20040030852), Miloushev et al. (US 20020120763), and further in view of Tsaur et al. (US 20040054697).

In the specification, page 4, paragraph 21, Applicants teach: "The network environment 10 illustrated in Figure 1 supports the Network Data Management Protocol (NDMP). The NDMP and its corresponding architecture are based on a client-server model. In the NDMP architectural scheme, an NDMP compliant backup application, which is referred to as a Data Management Application (DMA) 12, is considered to be the client. For example, as illustrated in Figure 1, the DMA 12 interacts over a network 14 with the NDMP server 16 to manage the transfer of data between the NDMP data service 18 and the tape service 20, both of which reside on the NDMP server 16." As per claims 12 and 28, Lee, Mutalik, and Cohn do not teach communicating file history information to a data management application. Tsaur et al. teach backup data using file history messages – par. 0010; backup operations, files and directories, storage devices – par. 0024; writing the directory structure to the backup – pars. 0008, 0029, 0031; add a list of file attributes to the file history to be backed up – par. 0032. Thus, it would have been obvious to one of ordinary skill in the art at the time of the

invention to combine Lee's, Mutalik's, Cohn's, with Tsauro et al.'s teaching in order to better allow file history, versions, and related information be backed up.

Claims 14 and 30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lee (US 2003/0131209), Mutalik et al. (US 6029166), and further in view of Tsauro et al. (US 20040054697).

As per claims 14 and 30, Lee and Mutalik do not explicitly teach writing the directory structure based on the backup path to the backup image. Tsauro et al. teach backup data using file history messages – par. 0010; backup operations, files and directories, storage devices – par. 0024; writing the directory structure to the backup – pars. 0008, 0029, 0031; add a list of file attributes to the file history to be backed up – par. 0032. Thus, it would have been obvious to one of ordinary skill in the art at the time of the invention to combine Lee's, Mutalik et al.'s teachings with Tsauro et al.'s teaching in order to backup nodes including files in directories in the backup paths.

Claims 15-16 and 31-32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lee (US 2003/0131209), Mutalik et al. (US 6029166), and further in view of Coombs et al. (US 20040030852).

As per claims 14 and 30, Lee teaches the offset address has the same value as that of the jump address – pars. 0052, 0064. Lee and Mutalik do not explicitly teach verifying the location in the backup image. Coombs further teach verification step whether the file begins at the offset into the backup ...- par. 0047. Thus, it would have been obvious

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to one of ordinary skill in the art at the time of the invention to combine Lee's, Mutalik et al.'s teachings with Coombs et al.'s teaching in order to effectively manage the backup process.

Allowable Subject Matter

Claims 6, 9, 13, 15, and 22, 25, 29, 31 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to LINH BLACK whose telephone number is 571-272-4106. The examiner can normally be reached on Mon.-Thurs..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Don Wong can be reached on 571-272-1834. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

LINH BLACK
Examiner
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A handwritten signature in black ink, appearing to read 'Linh Black', is positioned to the right of the printed name and title.

June 7, 2007